

INTERNATIONAL SEARCH REPORT

International Application No.
PCT/EP 03/04899A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C01B17/04 B01D53/86

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C01B B01D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 628 977 A (HEISEL MICHAEL ET AL) 13 May 1997 (1997-05-13) column 6, line 35-49; figure 2 ---	1-6
X	EP 0 672 618 A (LINDE AG) 20 September 1995 (1995-09-20) column 6, line 54-58 column 8, line 18-49; figure ---	1-6
A	WO 01 30692 A (MONSANTO CO) 3 May 2001 (2001-05-03) the whole document ---	1-6
A	GB 769 995 A (GAS COUNCIL) 13 March 1957 (1957-03-13) page 7; figure ---	1-6
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

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/EP 03/04899

C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	DE 38 43 295 A (KRUPP KOPPERS GMBH) 28 June 1990 (1990-06-28) column 3, line 8-15 -----	1

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International Application No.

/EP 03/04899

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5628977	A	13-05-1997	DE 4239811 A1 DE 59302392 D1 WO 9412430 A1 EP 0670811 A1	01-06-1994 30-05-1996 09-06-1994 13-09-1995
EP 0672618	A	20-09-1995	DE 4409203 A1 AT 167653 T CA 2144893 A1 DE 59502626 D1 EP 0672618 A1 US 5676921 A	21-09-1995 15-07-1998 18-09-1995 30-07-1998 20-09-1995 14-10-1997
WO 0130692	A	03-05-2001	AU 8030100 A BR 0014908 A CA 2386336 A1 CN 1382105 T EP 1230149 A2 JP 2003512285 T WO 0130692 A2	08-05-2001 11-06-2002 03-05-2001 27-11-2002 14-08-2002 02-04-2003 03-05-2001
GB 769995	A	13-03-1957	NONE	
DE 3843295	A	28-06-1990	DE 3843295 A1 CN 1043681 A , B DD 290404 A5 DE 3919908 A1 ES 2017241 A6 PL 163291 B1 US 5100640 A ZA 8908261 A	28-06-1990 11-07-1990 29-05-1991 20-12-1990 01-01-1991 31-03-1994 31-03-1992 26-09-1990